1   CON6000   RidePro e control panel

4-DIG1051 Sending units

4-FIT7007

4-FIT7008

1-A207

1- Wiring harness for CON6000 (WIR8000)

RidePRO

Installation of the RidePro e Control Panel and ECU

Installation notes:

- Disconnect the negative battery cable.

- Before starting the installation turn the DIP switches to the OFF position. If this is not done the vehicle may fully deflate when the key is turned on.

- The ECU should be mounted inside the vehicle to avoid moisture and to be accessible to make programming changes. Do not mount the ECU box in the engine bay or underneath the car, it is not weather proof and must be mounted in a dry area inside the vehicle. It is also best if mounted as far away from the compressor as possible. The electric motor in the compressor can cause interferences that may affect the air pressure pre-set function.

- Do not plug in the ECU until all the wiring is complete.

- The air pressure sending units must be grounded to function properly. This can be accomplished through a metal mounting bracket or by attaching a ground wire to the main body of the sensor. Too much Teflon between the sending unit and the bulkhead can also attribute to a poor ground. It may also be necessary to run the ground wire directly to the negative side of the battery post.

- The control panel display unit can be flush mounted or surface mounted in any location inside the vehicle…or it can be left unmounted. It is supplied with 6 ft. leads to the computer box. 12 ft. leads are available from the factory if desired. DO NOT lengthen or shorten these leads…call the factory for a longer harness.

- The control panel is an LCD display. The pressure reading may not be legible if mounted at an extreme angle to the driver. You may want to power up the system temporarily to insure you are able to see the display properly in your selected mounting location.

- If used with a fast compressor system the air pressure presets may not work properly. Although we have found that restricting the size of the exhaust ports can be helpful.

- Solid core spark plug wire will **<u>permanently damage</u>** any sensitive electronic equipment. Use proper RFI suppressor plug wires that are in good condition.

Wiring the ECU

Connector # 1 – Power harness
- Connect green/black stripe to----------------- illumination
- Connect yellow to------------------------------ ignition
- Connect black to----------------------------------directly to ground of battery
- Connect red to----------------------------------- directly to battery 12v positive

Connector # 2 – Sensor harness
- Connect green/white wire to------------------- left front pressure sensor
- Connect brown wire to------------------------- right front pressure sensor
- Connect purple wire to------------------------- left rear pressure sensor
- Connect red/white wire to--------------------- right rear pressure sensor

Connector # 3 – Solenoid harness   NOTE: This harness will have a weatherpak connector on it that will plug in to our existing RidePro solenoids. There will be no further connections necessary. If you have another brand or type of solenoid, please refer to the connection instructions below for proper connection.
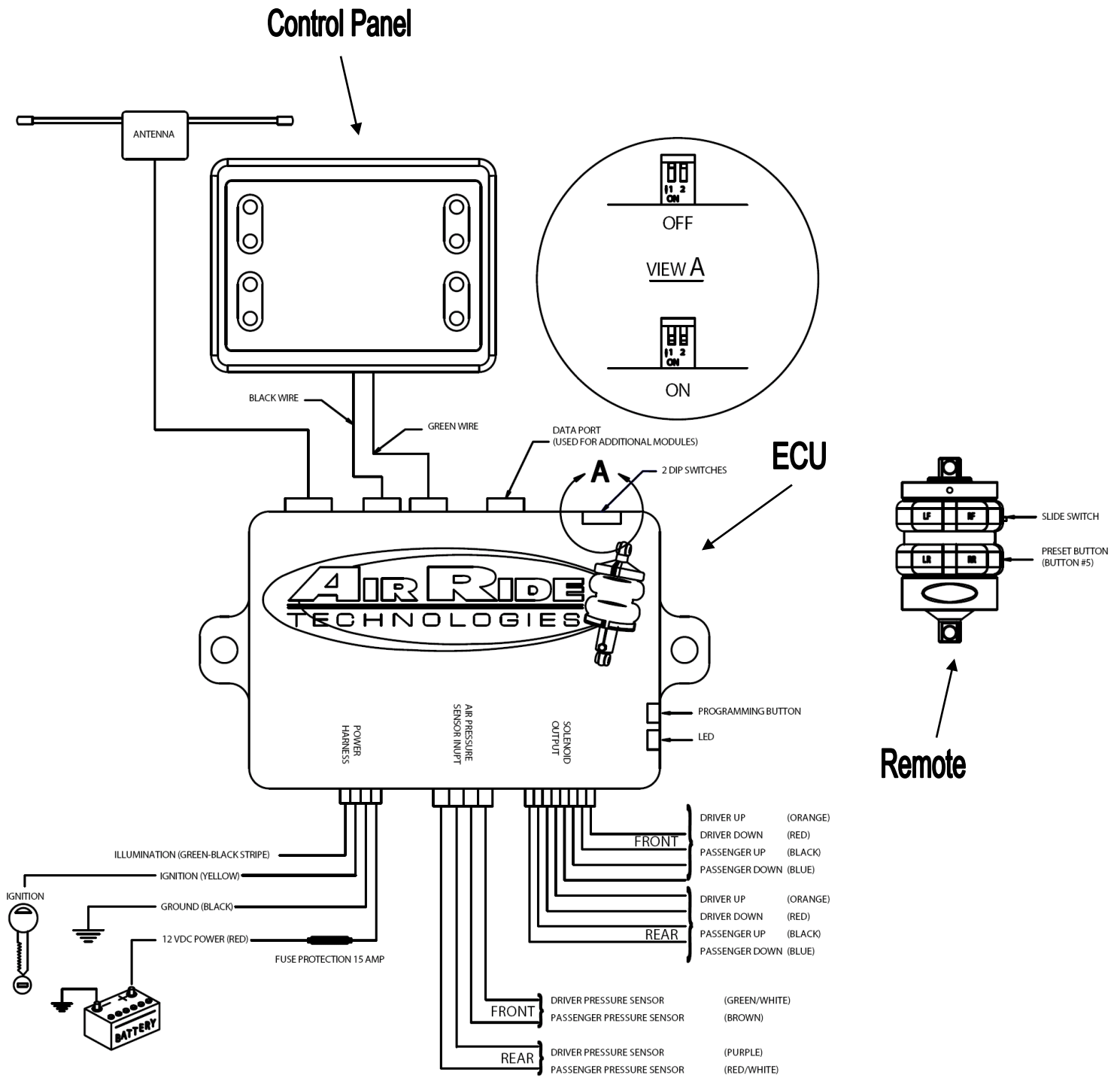
Front Harness
- Connect orange wire to ---------------------- left UP solenoid
- Connect red wire to -------------------------- left DOWN solenoid
- Connect black -------------------------------- right UP solenoid
- Connect blue to ------------------------------ right DOWN solenoid

Rear Harness
- Connect orange wire to --------------------- left UP solenoid
- Connect red wire to --------------------------left DOWN solenoid
- Connect black wire to ----------------------- right UP solenoid
- Connect blue wire to ------------------------- right DOWN solenoid

NOTE FOR EXISTING RIDEPRO INSTALLATIONS: If installing the weatherpak connectors OR using the wiring instructions above DOES NOT achieve proper orientations of the switches, you may have to swap the airline connection positions at the air valve to ensure that the control panel switches are coordinated with the correct air springs.

Control Panel and ECU Wiring Diagram

Control Panel

ANTENNA

OFF

VIEW **A**

ON

BLACK WIRE

GREEN WIRE

DATA PORT
(USED FOR ADDITIONAL MODULES)

ECU

A

2 DIP SWITCHES

AIR RIDE TECHNOLOGIES

SLIDE SWITCH

PRESET BUTTON
(BUTTON #5)

LF   RF

LR   RR

PROGRAMMING BUTTON

LED

Remote

POWER
HARNESS

AIR PRESSURE
SENSOR INUPT

SOLENOID
OUTPUT

DRIVER UP   (ORANGE)
DRIVER DOWN   (RED)
PASSENGER UP   (BLACK)
PASSENGER DOWN (BLUE)

FRONT

ILLUMINATION (GREEN-BLACK STRIPE)

IGNITION (YELLOW)

IGNITION

GROUND (BLACK)

12 VDC POWER (RED)

FUSE PROTECTION 15 AMP

BATTERY

DRIVER UP   (ORANGE)
DRIVER DOWN   (RED)
PASSENGER UP   (BLACK)
PASSENGER DOWN (BLUE)

REAR

FRONT   DRIVER PRESSURE SENSOR   (GREEN/WHITE)
         PASSENGER PRESSURE SENSOR   (BROWN)

REAR   DRIVER PRESSURE SENSOR   (PURPLE)
         PASSENGER PRESSURE SENSOR   (RED/WHITE)

How to code the key fob transmitter to the ECU:

If you have chosen the remote control option for your Ride Pro E system you will have to code the key fobs to the ECU to allow communication between the ECU and the key fobs.

1. Make sure the antenna is plugged into the ECU.
2. With the ignition switch "OFF", press the ECU programming button on the ECU 3 times. The programming LED on the ECU should then be lit solidly.
3. Within 25 seconds press the left front (LF) button on one key fob then press the left front (LF) on the other key fob with a short 2-3 second pause between key fobs. Up to 3 key fobs are possible.
4. When the LED on the ECU goes out the key fob will be ready for use.

How to program the air pressure presets:

To Program air pressure preset #1: This is the default setting that will be engaged every time the vehicle is started. It can also be engaged via the [optional] key fob transmitter by placing the slide switch in the "up" position and pressing the 5th button on the side of the key fob. It is recommended that this air pressure be adjusted to the highway ride height of the vehicle.

1. Place the DIP-switches located on the side of the computer box in the OFF (UP) position
2. Turn ignition ON
3. Set desired air pressure of the vehicle with main control panel switches
4. Press the "program" button, located on the side of the ECU 6 times, then led on the ECU will then flash.
5. Press the program button one additional time (7th) and hold it in for 4 seconds. The display on the control panel will then flash slowly 4 times to indicate the programming was successful. (This last step can also be done with the optional remote control. Instead of pressing the program button the 7th time, just set the slide switch on the side of the remote to the UP position and press the #5 button of the side of the remote.)

To Program air pressure setting #2: This air pressure preset is only accessible from the optional remote control keyfob transmitter. This air pressure setting is typically adjusted to set the vehicle at a lowered height for parking. This does not necessarily need to be 0 psi. Set it for the highest psi possible in which the suspension is bottomed out. This will help the vehicle rise a little faster.

1. Place the DIP-switches located on the side of the computer box in the OFF (UP) position
2. Turn ignition ON
3. Set desired air pressure of the vehicle with main control panel switches
4. Press the "program" button, located on the side of the computer box 6 times … the led beside the program button will then flash.
5. Set the slide switch on the side of the remote to the DOWN position and press the #5 button on the side of the remote to enter the #2 setting into the remote control system. The main control panel display will flash quickly four times to indicate remote control setting #2 was successful.

After ALL programming is complete, return the DIP-switches to the "ON" position to activate the air pressure presets.

NOTE: The vehicle will return to the #1 air pressure preset every time the vehicle is started. If you DO NOT wish to use the air pressure preset feature, simply leave the DIP switches in the "OFF" [UP] position.

How to operate the RidePro E system

The main control panel display contains the switches for inflating or deflating the individual air springs. The position of the switches corresponds to the position of the air springs in your vehicle. NOTE: The control panel is functional ONLY when the key is "ON". It is disabled when the key is "OFF". The optional remote control system is functional ONLY when the key is "OFF".

Control Panel:

- Top Left Switch: Controls left front ride height UP or DOWN
                            Indicates Air Pressure of left front air bag

- Top Right Switch: Controls right front ride height UP or DOWN
                            Indicates Air Pressure of right front air bag

- Bottom Left Switch: Controls left rear ride height UP or DOWN
                            Indicates Air Pressure of left rear air bag

- Bottom Right Switch: Controls right rear ride height UP or DOWN
                            Indicates Air Pressure of right rear air bag

Remote Key Fob: (Optional)

- Button 1 (LF): Controls left front ride height UP or DOWN

- Button 2 (RF): Controls right front ride height UP or DOWN

- Button 3 (LR): Controls left rear ride height UP or DOWN

- Button 4 (RR): Controls right rear ride height UP or DOWN

- Button 5 (side of transmitter): Activates air pressure presets

- Slide Switch UP: Controls buttons 1-4 ride height UP and controls level #1 setting

- Slide Switch DOWN: Controls buttons 1-4 ride height DOWN and controls level # 2 setting

Note: The Remote control will only function with the key in the OFF position.

Ride Pro e Troubleshooting Guide

Problem	Symptoms	Possible Cause	Possible Solution
Vehicle will not achieve air pressure target on 1st try. (It may take 2 or 3 attempts.)	When you first start the vehicle (or activate remote control), the vehicle goes up but stops at an air pressure that is lower than the programmed target. After the compressor runs to refill tank (and additional re-starts are made) the target pressure may be achieved.	1. Air tank is too small to allow vehicle to come up to target air pressure without refilling tank. 2. There may be a leak at the air tank or fittings that allows the tank pressure to leak down. 3. Vehicle is being fully deflated.	1. Install larger air tank. Minimum size of 3 gallons is recommended for most vehicles. Heavy vehicles may require an even larger tank. 2. Find and repair the leak. 3. Deflating the vehicle only until the suspension bottoms out saves air.
The air pressure reading is inaccurate or erratic.	Inaccurate pressure readings may also cause poor performance of the air pressure preset.	1. Poor ground connection to the pressure sending units. 2. Poor ground at the ECU. 3. Too much thread sealant on the sending units.	1. Install a dedicated ground wire from sensor mount and ECU directly to the battery. 2. You may also need to isolate the sending unit mount from the frame to eliminate any electrical interferences.
Air pressure preset and/or remote function does not work.	When you start the vehicle or activate the remote control, nothing happens	One or both DIP switches are turned OFF.	Make sure DIP switches located on the ECU are ON. This is the DOWN position.
Remote control does not work.		1. Remote control antenna is not plugged in or is plugged into the wrong terminal. 2. Remote is not coded to the ECU. 3. Yellow wire is connected to a constant 12v.	1. Check antenna connection. It should be plugged into the blue connector. 2. Refer to the instructions to code the remote to the ECU. 3. Connect to key hot.
Vehicle overshoots the target air pressure.		A poor ground to the air pressure sending unit will cause the computer to see bad input.	Run a direct ground wire from the sensor mounting to the negative post of the battery.
Display does not turn off when the vehicle is turned off.	Display does not turn off when the vehicle is turned off. Also the air pressure preset may not function properly.	The yellow and/or red wires in the power harness are hooked up incorrectly.	Check these 2 connections to make sure they are not reversed or otherwise installed incorrectly.
Switch function and air pressure reading seem reversed.	The top switches activate the rear air springs; the bottom switches activate the front air springs.	The weatherpak connectors going to the solenoids are reversed.	Switch the weatherpak cables at the solenoids.
Control panel switches do not activate the correct air spring.	Example: left front switch actuates the right rear air spring.	Airlines are connected differently from the wiring harness.	Switch airlines to appropriate air valve ports. Example: press the top right control panel switch to activate the air valve…connect the right front airline to that air valve port.
Control panel switches activate the correct air spring, but the air pressures read the wrong air spring.	Example: activating the right front air spring changes the left rear pressure.	Air pressure sensor airlines and/or wiring harness is connected to the wrong ports or terminals.	Review the pressure sensor airlines and wiring to achieve proper connection order.